

# Investigating the Impact of Large Mines on Chilean Communities



Copper mine in the Andes. (IDRC Photo: N. McKee)

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Mining has been a central part of Chile's culture since pre-colonial times. But the face of its mining map changed dramatically after the government introduced investment incentives in the 1980s, attracting a wave of foreign-owned companies to explore and develop previously undetected deposits.

Chile prides itself on being the world's top copper exporter and is home to some of the world's biggest copper producers. Indeed, the majority of its mining output comes from large foreign-owned mining projects. But the mining boom has raised some serious concerns among the people living next door to these projects.

## Initial opposition

"The initial reaction is always against the project. And it's not just fiction, there is a lot of history behind it," says [José Miguel Sánchez](#), an economist at Chile's Pontificia Universidad Católica.

With funding from the International Development Research Centre (IDRC), Dr Sánchez and a team of researchers at the Departamento de Economía, [Universidad de Chile](#) conducted a study on the impact of three large mining projects on local communities. The first involved the Escondida copper mine — the largest private mine in Chile — owned by a consortium led by Australia's Broken Hill Proprietary. Escondida is located in the Atacama desert of northern Chile, 160 kilometres from the city of Antofagasta. The second was Candelaria, owned by the U.S.-based Phelps Dodge Corporation. Candelaria is also located in the northern mining belt, 20 kilometres from the town of Copiapo. Lastly, the team looked at the Fachinal gold and silver mine, owned by the U.S.-based Coeur D'Alene Mines Corporation. Unlike the others, Fachinal is located in the sparsely populated extreme south of Chile, where mining is uncommon and farming is the main economic activity.

## **Good practices**

To the researchers' surprise, these projects contradicted the widely held stereotype that large multinational companies are impersonal and insensitive giants with little regard for local populations or the environment. The researchers did document some negative impacts ranging from depleting water resources in the area surrounding the Escondida and Candelaria mines to an increase in prostitution and venereal diseases in a town near Fachinal. But to the extent that the mining companies pursued certain "good practices," the damage done to the communities could be minimized, the team concluded. The most successful in this regard was Escondida, which maintained working relationships with local scientists and responded swiftly to any allegations of pollution or threats to wildlife by commissioning studies.

Dr Sánchez, along with economist Veronica Kunze and anthropologist [Julio Castillo](#), concluded that the main reason for the relatively healthy relations between large mining interests and local communities is the existence of internal corporate guidelines defining each company's mission, standards, and procedures — guidelines designed to be strictly followed by every employee.

## **Corporate model**

"In all the cases, we see a corporate model, or a shared mental model, that responds to a particular mission," explains Castillo. He adds that this practice of defining "how to do things right" is absent in most small locally owned mines.

The corporate model, which rules regardless of the local context, shapes the way the company interacts with the community. It also sets environmental standards that are often superior to local laws. For example, Escondida's mission statement insists that the company must keep local authorities continually informed of possible dangers to the environment caused by the mine. Both Escondida and Candelaria officials carried out environmental impact studies before Chilean law required it. And they introduced cleaner technologies in their processing plants.

## **Community relations**

A second set of "good practices" noted by the researchers concerns a company's external affairs strategy — how it relates to the community. In the areas where Escondida and Candelaria are located, there is a strong sense among community members that important economic benefits remain in the immediate region, despite the foreign ownership of the mine. The researchers attribute this to the companies' commitment to local purchasing and hiring. For example, 80% of Escondida's 2,000 permanent staff and 82% of Candelaria's 860 employees were hired locally.

In addition, all three mines have a policy that gives preference to local suppliers, where possible. However, many local suppliers believe that their share of mining company purchases could be higher. For now, they are often hindered by competition from suppliers outside the region, either from the capital city or abroad, that are better prepared to meet the quality and safety standards required by the mining company. To address this, the research team recommends that — like Escondida — mining companies help local suppliers improve the quality of their products.

## **Regional development**

Another key point mining companies should understand, the researchers argue, is the value that local communities place on any permanent contributions to regional development. This is especially true in areas with a strong mining culture, where enthusiasm over the economic benefits of new mining projects is tempered by the knowledge that all mines eventually close.

In its community, Escondida created a non profit charitable foundation to support educational, health, and technological development projects. As a result, it was more successful at injecting long-term benefits than the other mining companies, which focused more on economic activities with time frames limited to the mine's productive life.

### **Unrealistic expectations**

The case of Fachinal underscored a third component of "good practices" that companies need to consider. The population surrounding this facility had no prior experience with mining. According to government statistics, 61% of the community members live in poverty, and their desire to break the poverty cycle gave them unrealistic expectations of the economic benefits that the mine would bring. "Fachinal was seen as a salvation," says Dr Sánchez. But the actual benefits were much smaller partly due to the relatively small size of the mine, a drop in the price of gold, and contracts that the mine owners made with businesses outside the region to supply food and other services.

To alleviate this problem, the researchers recommend that mining companies learn as much as possible about the socio-economic structure before entering a community. One way is to send in experts on socio-cultural affairs and community development to gain a better understanding of a community's culture, beliefs, and needs.

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